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The block diagram illustrates a digital video receiver system. The process begins with an **INPUT** signal entering an **RF TUNER** block. The output of the RF Tuner goes to an **IF** (Intermediate Frequency) block, which then feeds into an **ADC** (Analog-to-Digital Converter). The ADC is controlled by a **CLK** (Clock) signal. The output of the ADC is sent to a **DIGITAL DEMODULATOR AND CARRIER RECOVERY** block. This block provides a **SEGMENT SYNC AND SYMBOL CLK. RECOVERY** signal to the ADC and a **FIELD SYNC DETECTOR** block. The Field Sync Detector outputs a **29** signal to an **NTSC CO-CHANNEL INTERFERENCE DETECTOR** block. The output of this detector goes to an **ADAPTIVE CHANNEL EQUALIZER** block (labeled **21**). The Adaptive Channel Equalizer is controlled by a **36** signal from a **PHASE TRACKING LOOP** block (labeled **20**). The Phase Tracking Loop is controlled by a **40** signal from a **TRELLIS DECODER** block (labeled **13**). The Trellis Decoder is controlled by a **42** signal from a **DATA DE-INTERLEAVER** block. The Data De-Interleaver is controlled by a **44** signal from a **REED-SOLOMON DECODER** block. The Reed-Solomon Decoder is controlled by a **45** signal from a **DESCRAMBLER (DERANDOMIZER)** block. The Descrambler is controlled by a **46** signal from the **AUDIO, VIDEO AND DISPLAY PROCESSORS** block. The Descrambler also outputs a **48** signal to the Audio, Video and Display Processors. A **MICRO-CONTROLLER** block (labeled **60**) is connected to the Phase Tracking Loop, Adaptive Channel Equalizer, and Descrambler via a **17** signal line. The Micro-Controller also receives a **30** signal from the NTSC Co-Channel Interference Detector and a **47** signal from the Descrambler. The Micro-Controller outputs a **18** signal to the Data De-Interleaver and a **29** signal to the Field Sync Detector. The output of the Reed-Solomon Decoder is also sent to the **AUDIO, VIDEO AND DISPLAY PROCESSORS** block.

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